IBIS Common Format

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TODO:
- Expand on the explanations of a Compendium serialization
- Articulate the rules for assigning link types
- Trim unnecessary attributes
  - Subject to dialogues

Background

A DTD that specifies the XML serialization for IBIS elicitation platforms is specified. The specification has been created based on dialogues among the following individuals related to particular IBIS platforms:
- Jack Park—Compendium
- David Price—DebateGraph
- Mark Klein—Deliberatorium

Differences and Restrictions

There are known differences among the three platforms. Those differences suggest certain restrictions to capabilities as follows:
- Common Node Types
  - Question (Issue)
  - Answer (Position)
  - Map
  - Pro Argument
  - Con Argument
- ELEMENT = node ATTRIBUTE = "label"
  - Restricted to 70 characters

Behaviors

Nested Maps
Compendium is known to permit *nested maps*. That is, Compendium captures maps as *view elements*, each view serving as a container for the nodes captures in the map node for which it stands. Other platforms are free to treat nested maps by ignoring the nesting feature. For instance, in an *outline* view, nested maps might appear as follows:

```
Root Map
     Question
          Answer
               Pro Argument
               Con Argument
          Map
               Answer
                    Pro Argument
```

Nodes Serialized But Not Included in Common Format
Suggested behavior: ignore those nodes.

Multiple Pages of Details from Compendium
Candidate suggested behaviors:
- Restrict Compendium to one page of details
- When multiple pages are detected:
    - concatinate and trim as needed

ELEMENT = view ATTRIBUTES = Xposition and Yposition
Suggested behaviors:
- Import: ignore unless its useful or can be transformed to local coordinates
    - Compendium will need to deal with auto arrange when it encounters "0" as values
- Export: default to "0"

Simple Example XML Serialization from Compendium

See **Appendix A** for the XML serialization.

A simple dialogue map with a nested map node was created to demonstrate a Compendium XML document. The full dialogue takes two images to display: Figire 1 and Figire 2.
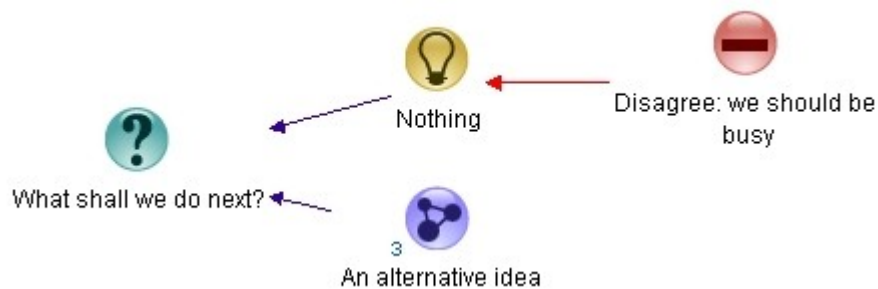
Figire 1: Outer (root) Map

Figire 2: Nested Map

Examining a Compendium Document

The outer element is <model rootview="...">

A *model* is a container for the following:

- views

- ○ view
- • nodes
  - ○ node
    - ▪ details
      - • page
- • links
  - ○ link
    - ▪ linkviews
      - • linkview

Models and Views and their Relation to Nodes
<model rootview="19216811011237140096791">
<views>
 <view viewref="19216811011237140096791" noderef="19216811021244938183265"
       XPosition="201" YPosition="236" created="1244938183265"
       lastModified="1244938183265" showTags="true" showText="true" showTrans="true"
       showWeight="true" smallIcon="false" hideIcon="false" labelWrapWidth="25"
       fontsize="12" fontface="Dialog" fontstyle="0" foreground="-16777216" background="-1">
 </view>
</views>

Note: Many of the attributes are slated to be removed from the Common Format DTD.

`viewref` refers to a view, synonymous with a map. `noderef` refers to a *node* identifier. Further explanation is necessary.

In Compendium, there is a Map node that is created in a *project*. That is the outer view. Its `viewref` points to a `noderef` that represents that outer map. That `noderef` becomes the viewref for the outer map such as Figire 1. The `noderefs` of *that* `viewref` will be the nodes contained in that view. In our example, one of those nodes is a map node. It becomes a new `viewref`, the `noderefs` for which are the nodes in the nested map, such as Figire 2.

Nodes and Details
 <nodes>
 <node id="19216811011237140096791" type="2" extendedtype="" originalid=""
       author="jackpark" created="1237140096775" lastModified="1237140096775"
       label="Home Window" state="2" lastModificationAuthor="jackpark">
  <details>
   <page nodeid="19216811011237140096791" author="jackpark"
       created="1237140096775" lastModified="1237140096775"
       pageno="1">Home Window of jackpark</page>
  </details>
 </node>
</nodes>

Note that *details* are paged. In Compendium, there is the editorial option to create pages of details.

Links

```xml
<links>
 <link id="19216811021244938254109" created="1244938254109"
        lastModified="1244938254109" author="jackpark"
       type="39"
       originalid=""
       from="19216811021244938215031" to="19216811021244938202218"
       label="" arrow="1">
  <linkviews>
   <linkview id="19216811021244938183265"/>
  </linkviews>
 </link>
```

Node Types

From the Compendium source file IcompendiumConstants

```
/**

* This represents a map, which is a container for other nodes and links.

* This can be used to:

* - create a 'picture'of the relationships between ideas;

* - group questions and ideas together in meaningful clusters;

* - create associative links between nodes.

*/

public final static int          MAPVIEW                = 2;


/** This represents a Question or Issue for discussion. */

public final static int          ISSUE                = 3;


/** The represents an Answer or Position, often in response to a question or issue.*/

public final static int          POSITION                = 4;


/** This represents a response in favour of an answer or position. */

public final static int          PRO                = 6;


/** This represents a response against an answer or position. */

public final static int          CON                = 7;
```

NOTE: In Compendiuim, there are occasions where a node is used more than once, prompting a *shortcut* type. A shortcut type is the node type + 10: a MAPVIEW shortcut = 12.

Link Types

From the Compendium source file IcompendiumConstants

```
        //LINK TYPES
        /** Indicates the Node at the FROM end of the link responds to the Node at the TO end of
the link */
        public final static String              RESPONDS_TO_LINK            = "39";


        /** Indicates the Node at the FROM end of the link supports the Node at the TO end of the
link */
        public final static String              SUPPORTS_LINK               = "40";


        /** Indicates the Node at the FROM end of the link objects to the Node at the TO end of the
link */
        public final static String              OBJECTS_TO_LINK              = "41";


        /** Indicates the Node at the FROM end of the link challenges the Node at the TO end of the
link */
        public final static String              CHALLENGES_LINK              = "42";


        /** Indicates the Node at the FROM end of the link is a specialization of the Node at the TO
end of the link */
        public final static String              SPECIALIZES_LINK            = "43";


        /** Indicates the Node at the FROM end of the link expans on the Node at the TO end of the
link */
        public final static String              EXPANDS_ON_LINK              = "44";


        /** Indicates the Node at the FROM end of the link is related to the Node at the TO end of
the link */
        public final static String              RELATED_TO_LINK              = "45";


        /** Indicates the Node at the FROM end of the link is about the Node at the TO end of the
link */
        public final static String              ABOUT_LINK                   = "46";


        /** Indicates the Node at the FROM end of the link resolves the Node at the TO end of the
link */
        public final static String              RESOLVES_LINK                = "47";
```

```java
/** Indicates which link type is the default link type - Currently the 'Related To Link' */
public final static String        DEFAULT_LINK                = "45";
```

DTD

The following DTD is a subset of the Compendium DTD

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!ELEMENT model (views, nodes, links, codes, meetings*)>
<!ATTLIST model
        rootview CDATA #REQUIRED
>

<!ELEMENT page (#PCDATA)>
<!ATTLIST page
        nodeid CDATA #REQUIRED
        author CDATA #REQUIRED
        pageno CDATA #REQUIRED
        created CDATA #REQUIRED
        lastModified CDATA #REQUIRED
>
<!ELEMENT details (#PCDATA | page)*>
<!ELEMENT detail (#PCDATA)>
<!ELEMENT linkview (#PCDATA)>
<!ATTLIST linkview
        id CDATA #REQUIRED
>
<!ELEMENT linkviews (#PCDATA | linkview)*>
<!ELEMENT link (#PCDATA | linkviews)*>
<!ATTLIST link
        id CDATA #REQUIRED
        created CDATA #REQUIRED
        lastModified CDATA #REQUIRED
        author CDATA #REQUIRED
        type CDATA #REQUIRED
        originalid CDATA #REQUIRED
        to CDATA #REQUIRED
        from CDATA #REQUIRED
        label CDATA #IMPLIED
        arrow CDATA #REQUIRED
>
<!ELEMENT links (#PCDATA | link)*>
<!ELEMENT node (details*, detail*, source, image, background, coderefs, shortcutrefs,
mediaindexes*)>
<!ATTLIST node
        id CDATA #REQUIRED
        type CDATA #REQUIRED
        extendedtype CDATA #REQUIRED
        originalid CDATA #REQUIRED
        author CDATA #REQUIRED
        created CDATA #REQUIRED
        lastModified CDATA #REQUIRED
        label CDATA #REQUIRED
        state CDATA #REQUIRED
        lastModificationAuthor CDATA #IMPLIED
```

```
>
<!ELEMENT nodes (node+)>
<!ELEMENT view (#PCDATA)>
<!ATTLIST view
        viewref CDATA #REQUIRED
        noderef CDATA #REQUIRED
        XPosition CDATA #REQUIRED
        YPosition CDATA #REQUIRED
        created CDATA #IMPLIED
        lastModified CDATA #IMPLIED
        showTags CDATA #IMPLIED
        showText CDATA #IMPLIED
        showTrans CDATA #IMPLIED
        showWeight CDATA #IMPLIED
        smallIcon CDATA #IMPLIED
        hideIcon CDATA #IMPLIED
        labelWrapWidth CDATA #IMPLIED
        fontsize CDATA #IMPLIED
        fontface CDATA #IMPLIED
        fontstyle CDATA #IMPLIED
        foreground CDATA #IMPLIED
        background CDATA #IMPLIED
>
<!ELEMENT views (view+)>
```

APPENDIX A—XML Serialization of TrivialMap Example

Note: some elements, e.g. <code> and <coderef> where hand removed as not applicable to the common DTD.

```
<model rootview="19216811011237140096791">
<views>
 <view viewref="19216811011237140096791" noderef="19216811021244938183265"
XPosition="201" YPosition="236" created="1244938183265" lastModified="1244938183265"
showTags="true" showText="true" showTrans="true" showWeight="true" smallIcon="false"
hideIcon="false" labelWrapWidth="25" fontsize="12" fontface="Dialog" fontstyle="0"
foreground="-16777216" background="-1">
 </view>
 <view viewref="19216811021244938183265" noderef="19216811021244938215031"
XPosition="207" YPosition="28" created="1244938215031" lastModified="1244938215031"
showTags="true" showText="true" showTrans="true" showWeight="true" smallIcon="false"
hideIcon="false" labelWrapWidth="25" fontsize="12" fontface="Dialog" fontstyle="0"
foreground="-16777216" background="-1">
 </view>
 <view viewref="19216811021244938183265" noderef="19216811021244938202218"
XPosition="16" YPosition="68" created="1244938202218" lastModified="1244938202218"
showTags="true" showText="true" showTrans="true" showWeight="true" smallIcon="false"
hideIcon="false" labelWrapWidth="25" fontsize="12" fontface="Dialog" fontstyle="0"
foreground="-16777216" background="-1">
 </view>
 <view viewref="19216811021244938183265" noderef="19216811021244938232984"
XPosition="316" YPosition="20" created="1244938232984" lastModified="1244938232984"
showTags="true" showText="true" showTrans="true" showWeight="true" smallIcon="false"
hideIcon="false" labelWrapWidth="25" fontsize="12" fontface="Dialog" fontstyle="0"
foreground="-16777216" background="-1">
 </view>
 <view viewref="19216811021244938183265" noderef="19216811021244938256703"
XPosition="177" YPosition="106" created="1244938256703" lastModified="1244938256703"
showTags="true" showText="true" showTrans="true" showWeight="true" smallIcon="false"
hideIcon="false" labelWrapWidth="25" fontsize="12" fontface="Dialog" fontstyle="0"
foreground="-16777216" background="-1">
 </view>
 <view viewref="19216811021244938256703" noderef="19216811021244938315859"
XPosition="144" YPosition="20" created="1244938315859" lastModified="1244938315859"
showTags="true" showText="true" showTrans="true" showWeight="true" smallIcon="false"
hideIcon="false" labelWrapWidth="25" fontsize="12" fontface="Dialog" fontstyle="0"
foreground="-16777216" background="-1">
 </view>
 <view viewref="19216811021244938256703" noderef="19216811021244938304531"
XPosition="16" YPosition="59" created="1244938304531" lastModified="1244938304531"
showTags="true" showText="true" showTrans="true" showWeight="true" smallIcon="false"
hideIcon="false" labelWrapWidth="25" fontsize="12" fontface="Dialog" fontstyle="0"
foreground="-16777216" background="-1">
 </view>
 <view viewref="19216811021244938256703" noderef="19216811021244938322937"
XPosition="142" YPosition="98" created="1244938322937" lastModified="1244938322937"
showTags="true" showText="true" showTrans="true" showWeight="true" smallIcon="false"
```

hideIcon="false" labelWrapWidth="25" fontsize="12" fontface="Dialog" fontstyle="0" foreground="-16777216" background="-1">
 </view>
 </views>

 <nodes>
 <node id="19216811011237140096791" type="2" extendedtype="" originalid="" author="jackpark" created="1237140096775" lastModified="1237140096775" label="Home Window" state="2" lastModificationAuthor="jackpark">
  <details>
   <page nodeid="19216811011237140096791" author="jackpark" created="1237140096775" lastModified="1237140096775" pageno="1">Home Window of jackpark</page>
  </details>
  <source></source>
  <image width="0" height="0"></image>
 </node>
 <node id="19216811021244938183265" type="2" extendedtype="" originalid="" author="jackpark" created="1244938183265" lastModified="1244938190734" label="TrivialMap" state="2" lastModificationAuthor="jackpark">
  <details>
   <page nodeid="19216811021244938183265" author="jackpark" created="1244938183265" lastModified="1244938190734" pageno="1"></page>
  </details>
  <source></source>
  <image width="0" height="0"></image>
 </node>
 <node id="19216811021244938215031" type="4" extendedtype="" originalid="" author="jackpark" created="1244938215031" lastModified="1244938217953" label="Nothing" state="2" lastModificationAuthor="jackpark">
  <details>
   <page nodeid="19216811021244938215031" author="jackpark" created="1244938215031" lastModified="1244938217953" pageno="1"></page>
  </details>
  <source></source>
  <image width="0" height="0"></image>
 </node>
 <node id="19216811021244938202218" type="3" extendedtype="" originalid="" author="jackpark" created="1244938202218" lastModified="1244938211281" label="What shall we do next?" state="2" lastModificationAuthor="jackpark">
  <details>
   <page nodeid="19216811021244938202218" author="jackpark" created="1244938202218" lastModified="1244938211281" pageno="1"></page>
  </details>

```xml
      <source></source>
      <image width="0" height="0"></image>
      <background></background>
      <shortcutrefs>
      </shortcutrefs>
    </node>
    <node id="19216811021244938232984" type="7" extendedtype="" originalid="" author="jackpark" created="1244938232984" lastModified="1244938245625" label="Disagree: we should be busy" state="2" lastModificationAuthor="jackpark">
      <details>
       <page nodeid="19216811021244938232984" author="jackpark" created="1244938232984" lastModified="1244938245625" pageno="1"></page>
      </details>
    </node>
    <node id="19216811021244938256703" type="2" extendedtype="" originalid="" author="jackpark" created="1244938256703" lastModified="1244938262109" label="An alternative idea" state="2" lastModificationAuthor="jackpark">
      <details>
       <page nodeid="19216811021244938256703" author="jackpark" created="1244938256703" lastModified="1244938262109" pageno="1"></page>
      </details>
    </node>
    <node id="19216811021244938315859" type="3" extendedtype="" originalid="" author="jackpark" created="1244938315859" lastModified="1244938318562" label="What about?" state="2" lastModificationAuthor="jackpark">
      <details>
       <page nodeid="19216811021244938315859" author="jackpark" created="1244938315859" lastModified="1244938318562" pageno="1"></page>
      </details>
    </node>
    <node id="19216811021244938304531" type="4" extendedtype="" originalid="" author="jackpark" created="1244938304531" lastModified="1244938308187" label="Let&apos;s write a story" state="2" lastModificationAuthor="jackpark">
      <details>
       <page nodeid="19216811021244938304531" author="jackpark" created="1244938304531" lastModified="1244938308187" pageno="1"></page>
      </details>
    </node>
    <node id="19216811021244938322937" type="6" extendedtype="" originalid="" author="jackpark" created="1244938322937" lastModified="1244938326265" label="Sounds good" state="2" lastModificationAuthor="jackpark">
      <details>
       <page nodeid="19216811021244938322937" author="jackpark" created="1244938322937" lastModified="1244938326265" pageno="1"></page>
      </details>
    </node>
  </nodes>
  <links>
   <link id="19216811021244938254109" created="1244938254109" lastModified="1244938254109" author="jackpark" type="39" originalid="" from="19216811021244938215031" to="19216811021244938202218" label="" arrow="1">
    <linkviews>
```

    <linkview id="19216811021244938183265"/>
   </linkviews>
  </link>

  <link id="19216811021244938264671" created="1244938264671"
lastModified="1244938264671" author="jackpark" type="39" originalid=""
from="19216811021244938256703" to="19216811021244938202218" label="" arrow="1">
   <linkviews>
    <linkview id="19216811021244938183265"/>
   </linkviews>
  </link>

  <link id="19216811021244938249562" created="1244938249562"
lastModified="1244938249562" author="jackpark" type="41" originalid=""
from="19216811021244938232984" to="19216811021244938215031" label="" arrow="1">
   <linkviews>
    <linkview id="19216811021244938183265"/>
   </linkviews>
  </link>

  <link id="19216811021244938321125" created="1244938321125"
lastModified="1244938321125" author="jackpark" type="39" originalid=""
from="19216811021244938315859" to="19216811021244938304531" label="" arrow="1">
   <linkviews>
    <linkview id="19216811021244938256703"/>
   </linkviews>
  </link>

  <link id="19216811021244938328765" created="1244938328765"
lastModified="1244938328765" author="jackpark" type="40" originalid=""
from="19216811021244938322937" to="19216811021244938304531" label="" arrow="1">
   <linkviews>
    <linkview id="19216811021244938256703"/>
   </linkviews>
  </link>
 </links>
</model>